

Findings of the independent agency report on Quality of Service

3 Cellular Mobile Telephone Service:

3.1 In Tamilnadu service area the audit and survey of service providers, namely, Aircel, BSNL, Bharti Airtel, Reliance Communications, Tata Teleservices and Vodafone was conducted.

3.2 Objective Assessment/Audit of Quality of Service performance: For almost all network parameters, all the service providers meet the TRAI specified benchmark. The Time Consistent Busy Hour (TCBH) reported by all the service providers except RCOM matched the network busy hour calculated by IMRB auditors. Service Provider's performance in respect of cellular mobile telephone service based on one month data is given in Annex-`1A'. The areas of concern i.e. parameters, for which benchmark is not met by the service providers, are identified based on analysis of one month QoS performance data and live measurement.

3.3 **Drive Test:** The drive tests were conducted to verify parameters like Call Drop Rate, Call Set-up Success Rate, Blocked Call Rate and Percentage of Connections with Good Voice Quality. The areas of concern (i.e. parameters) are identified as below:

- Blocked Call Rate
- Call Set-up Success Rate
- Call Drop Rate
- Connections with good voice quality

3.4 **Customer perception of service:** Service Providers' performance in respect to the level of customer perception of service against the specified benchmark is given in Annex-`1B'.

3.5 **Percentage of Customers Satisfied:** The gradation on "Satisfaction" score scale i.e. scores of "Very Satisfied" to "Satisfied" is given in Table-1 below. The survey results reveal that there is a need to improve the satisfaction level of subscribers with respect to the Help services, maintainability and supplementary services across the service providers.

Table-1(Cellular Mobile Telephone Service - Tamilnadu Service Area)

S. N.	Customer Perception of Services	Bharti Airtel	Vodafone	BSNL	RCOM	Aircel	TATA
1	%age subscribers satisfied with the provision of service	99%	99%	98%	98%	100%	99%
2a	%age subscribers satisfied with the billing performance (postpaid)	95%	97%	95%	98%	91%	92%
2b	%age subscribers satisfied with the billing performance (prepaid)	96%	98%	97%	97%	96%	98%

3	%age subscribers satisfied with help services	90%	84%	85%	78%	84%	87%
4	%age subscribers satisfied with network performance, reliability and availability	97%	95%	95%	96%	95%	97%
5	%age subscribers satisfied with maintainability	97%	94%	94%	95%	92%	97%
6	Overall customer satisfaction	98%	97%	98%	96%	96%	99%
7	%age subscribers satisfied with offered supplementary services	95%	92%	96%	91%	87%	100%

4. Basic Service (wire line)

4.1 Objective Assessment/Audit of QoS performance: Basic (Wire line) services audit for Tamilnadu circle broadly indicates that most of the service providers are not meeting the benchmarks for some of the Parameters. Service Provider's performance in respect of basic service (wire line) based on one month data is given in Annex-'2A'. The areas of concern i.e. parameters, for which benchmarks is not met by the service providers, are identified based on analysis of one month QoS performance data and live measurement as below:

- Fault incidences (No. of faults/100 subscribers/month).
- Fault repaired by next working day.
- Billing complaints per 100 bills issued.

4.2 Customer perception of service: Service Providers' performance in respect to the level of customer perception of service against the specified benchmark is given in Annex-'2B'.

4.3 Percentage of Customers Satisfied: The gradation on "Satisfaction" score scale i.e. scores of "Very Satisfied" to "Satisfied" is given in Table-2 below. The survey results reveal that there is a need to improve the satisfaction level of subscribers with respect to the help services, maintainability and supplementary services.

Table-2 {Basic Service(Wireline) - Tamilnadu Service Area }

S. N.	Customer Perception of Services	Bharti Airtel	BSNL	Rel Comm	TATA
1	% Subscriber satisfied with the provision of service	97%	98%	97%	97%
2a	% Subscriber satisfied with the billing performance (Post paid customers)	96%	98%	96%	90%
2b	% Subscribers satisfied with the billing performance (Pre paid customers)	95%	89%	98%	94%

3	% Subscriber satisfied with help services	93%	90%	79%	79%
4	% Subscriber satisfied with network performance, reliability and availability	97%	96%	98%	96%
5	% Subscriber satisfied with maintainability	91%	89%	80%	79%
6	Overall customer satisfaction	97%	95%	95%	96%
7	% Subscribers satisfied with offered supplementary services	88%	86%	92%	67%

5. Broadband Service

5.1 Objective Assessment/Audit of QOS performance: The audit for Broadband Service Providers was conducted at their respective network operating centre/point of presence (POPs) in the Tamilnadu circle. Service Provider's performance based on one month data is given in Annex -`3A`. The area of concern (i.e. parameters) for which benchmark not met by the service providers are identified based on analysis of one month QoS performance data and live measurements as below:

- Connections provided within 15 days.
- Fault repaired by next working day.

5.2 Customer perception of service:Service Providers' performance in respect to the level of customer perception of service against the specified benchmark is given in Annex-`3B`.

5.2 Percentage of Customers Satisfied: The gradation on "Satisfaction" score scale i.e. scores of "Very Satisfied" to "Satisfied" is given in Table-3 below. The survey results reveal that Help Services and Maintainability are the area where all service providers have scored relatively lower score as compared to other parameters.

Table-3 (Broadband Service- Tamilnadu Service Area)

S. N.	Customer Perception of Services	Bharti Airtel	BSNL	Rel Com	VSNL	Sify	Hathway
1	% Subscribers satisfied with the provision of service	100%	99%	98%	97%	99%	96%
2a	% Subscribers satisfied with the billing performance (Prepaid customers)	97%	100%	99%	100%	100%	97%
2b	% Subscribers satisfied with the Billing performance (Postpaid customers)	98%	98%	98%	95%	99%	93%
3	% Subscribers satisfied with help services	94%	88%	91%	76%	100%	62%
4	% Subscribers satisfied with network performance, reliability and availability	96%	97%	98%	91%	100%	90%
5	% Subscribers satisfied with maintainability	96%	94%	96%	81%	100%	87%
6	Overall level of customer satisfaction	96%	96%	96%	80%	99%	89%
7	% Subscribers satisfied with offered supplementary services	98%	93%	98%	87%	95%	98%

6. Telecom Consumers Protection and Redressal of Grievances score:

The Authority noted with concern that the awareness of subscribers of all the service providers regarding the three stage grievance redressal mechanism is still very low. The summary of survey results for assessment of implementation and effectiveness of Telecom Consumer Protection and Redressal of Grievances Regulations in respect of Cellular Mobile Service, Basic (Wire line) Service and Broadband Service is given in Annex-'1C', Annex '2C' and Annex "3C' respectively.

7. *The detailed Report on Quality of Service – Audit/Objective Assessment and Customer Satisfaction Survey, including grievance redressal mechanism, conducted during the period April, 2008 to August, 2008 is placed at TRAI Website (www.trai.gov.in).*

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Annex-‘1A’

Objective Assessment of Quality of Service – Service Provider’s Performance in respect of Cellular Mobile Telephone Service- Tamilnadu Service Area

Parameters	Benchmark	Bharti Airtel	BSNL	Vodafone	TATA Teleservices	Aircel	RCOM
Accumulated downtime for community isolation	< 24 hrs.	0.00	0.00	0.00	3.17 hr	107 hr	0.00
Call Set Up Success Rate (CSSR)	> 95%	97.22%	92.62%	98.89%	99.71%	98.54%	98.36%
Service Access Delay*	9 to 20 seconds (< = 15 seconds for 100 calls)	13.51	9.79	11.06	13.09	13.03	1.40
Blocked Call Rate							
<i>SDCCH /Paging Channel Congestion</i>	<1%	0.48%	0.51%	0.20%	0.00%	0.02%	0.00%
<i>TCH Congestion</i>	< 2%	0.66%	2.03%	1.81%	0.22%	1.50%	0.57%
Call drop rate	< 3%	1.11%	0.94%	1.41%	0.78%	0.46%	1.52%
Percentage connections with good voice quality*	> 95%	91%	88%	99%	97%	86%	99%
Service coverage*							
<i>In door</i>	>-75dbm	Complied	Complied	Complied	Complied	Complied	Complied
<i>In vehicle</i>	>-85dbm						
<i>Out door - in city</i>	>-95dbm						
POI congestion	< 0.5%	Complied	Complied	Complied	Complied	Complied	Complied
Calls answered electronically							
Percentage calls answered within 20 seconds	80%	100%	100%	100%	100%	100%	96%
Percentage calls answered within 40 seconds	95%	100%	100%	100%	100%	100%	96%
Calls Answered by the operator							
Percentage calls answered within 60 seconds	80%	97%	81%	98.09	56%	98%	95%
Percentage calls answered within 90 seconds	95%	98%	85%	98.69	56%	DNA	98%
Billing Complaints							
Billing complaints per 100 bills issued	<0.1%	0.00%	Details not provided by the operators	0.32%	0.07%	0.06%	0.08%
Percentage billing complaints resolved within 4 weeks	100%	NA		100%	100%	100%	100%
Period of refunds/payments due to customers from the date of resolution of complaints	<4 weeks	NA		100%	100%	100%	100%

*Details pertaining to these are obtained through operator assisted drive tests. Results of the drive tests are explained in greater detail in critical findings

** Methodology not in line with QoS

■ Figures provided on All Ind basis

■ Not meeting the benchmark

B*mark = TRAI Benchmark, DNA = Details not available,

NA: Not Applicable

Annex-`1B`
Customers Perception of Service for Cellular Mobile Telephone Service through Survey- Tamilnadu Service Area

S. N.	Customer Perception of Services	B'mark	Bharti Airtel	Vodafone	BSNL	RCOM	Aircel	TATA
1	%age subscribers satisfied with the provision of service	>95%	74%	75%	72%	71%	74%	70%
2a	%age subscribers satisfied with the billing performance (postpaid)	>90%	68%	71%	68%	70%	72%	69%
2b	%age subscribers satisfied with the billing performance (prepaid)	>90%	73%	75%	72%	72%	73%	72%
3	%age subscribers satisfied with help services	>90%	66%	66%	66%	62%	66%	69%
4	%age subscribers satisfied with network performance, reliability and availability	>95%	73%	74%	72%	73%	74%	71%
5	%age subscribers satisfied with maintainability	>95%	74%	73%	73%	74%	72%	72%
6	Overall customer satisfaction	>95%	73%	72%	71%	71%	72%	70%
7	%age subscribers satisfied with offered supplementary services	>95%	70%	68%	68%	68%	66%	67%

Annex-`1C`

Assessment of implementation and effectiveness of Telecom Consumer Protection and Redressal of Grievances Regulations in respect of Cellular Mobile Telephone Service through Survey- Tamilnadu Service Area

S.N.	Sub Parameter	Bharti Airtel	Vodafone	BSNL	R Com	Aircel	TATA
1	Awareness of three stage grievance mechanism	49%	42%	52%	49%	46%	55%
2	For pre-paid customers, awareness about item-wise call charge details on request	17%	11%	10%	10%	11%	10%
3	If aware (for pre-paid customers), ever denied of item wise usage charge details for pre-paid connection	2%	4%	9%	2%	3%	0%
4	For new customers, provisioning of 'Manual of Practice' while taking the new connection	23%	41%	11%	12%	22%	15%
5	Awareness of Call center for redressing grievances	85%	85%	73%	86%	87%	86%
6	Penetration of consumers made any complaints to the toll free number within last 6 months	11%	12%	7%	11%	12%	10%
7	Call center informing about the action taken on complaints	97%	90%	89%	89%	87%	92%
8	Resolution of complaint by customer care within 4 weeks of lodging complaint	36%	28%	43%	31%	20%	22%
9	percentage satisfied with complaint resolution by call centre	66%	61%	59%	57%	64%	60%
10	Awareness of Nodal officer for redressing grievances	3%	1%	10%	2%	5%	2%

Annex-`2A`
Objective Assessment of Quality of Service – Service Provider’s Performance in respect of Basic Service (Wire line) - Tamilnadu Service Area

S.no	Parameters	B'mark	Bharti Airtel	BSNL*	RCOM	TATA teleservices*
1	Provision of telephone after registration of demand					
1.1	Connections completed within 7 days	100%	100%	88%	100%	20%
2	Fault incidence/clearance statistics					
3	Fault incidences(No. of faults/100 subscribers/month)	<3	5.7	2.84	1.7	No faults
3.1	Faults repaired within 24 hours	>90%	74%	67%	90%	NA
3.2	Faults repaired within three working days	100%	100%	86%	100%	NA
4	Mean time to Repair (MTTR)	<8 hours	7.80	< 4	<5	NA
5	Call Completion Rate (CCR)	>55%	66%	60%	DNA	92%
6	Metering and billing credibility					
6.1	Billing complaints per 100 bills issued	<0.1%	0.71%	0.04%	0.00%	0.00%
6.2	%age of billing complaints resolved within 4 weeks	100%	100%	100%	NA	NA
7	Customer care/helpline promptness					
7.1	Shift requests attended					
	Shift requests attended within 3 days	95%	100%	69%	100%	NA
7.2	Closure request attended					
	Closure within 24 hours	95%	100%	81%	99%	NA
7.3	Supplementary (additional) service requests attended					
	Additional facility provided within 24 hours	95%	98%	98%	98%	100%
8	Response time to customer for assistance					
8.1	% age call answered through IVR in 20 seconds	80%	DNA	DNA	100%	100%
	% age call answered through IVR in 40 seconds	100%	DNA	DNA	100%	100%
8.2	% age calls answered by operator in 60 seconds	80%	93%	DNA	99%	98%
	% age calls answered by operator in 90 seconds	95%	96%	DNA	100%	99%
9	Time taken for refund of deposits after closure					
9.1	%age cases where refund received within 60 days	100%	100%	100%	NA	NA

{*Note: For BSNL data pertains to the sample 5% of exchanges audited during the period of April to July 2008, whereas for rest of the operators figures pertain to all the exchanges present in the circle, TATA teleservices has limited presence and offers Basic (Wire line) services primarily to corporate clients in Tamilnadu circle}

** Methodology not in line with QoS ◆ Figure provided on all India basis ◇ not meeting the Benchmark DNA:- Detail not available NA:- Not applicable

**Annex-`2B`
Customers Perception of Service for Basic Service (Wire line)
through Survey- Tamilnadu Service Area**

S. N.	Customer Perception of Services	Benchmark	Bharti Airtel	BSNL	Rel Comm	TATA
1	% subscribers satisfied with the provision of service	>95%	73%	72%	73%	80%
2a	% subscribers satisfied with the billing performance (Post paid customers)	>90%	71%	72%	71%	68%
2b	% subscribers satisfied with the billing performance (Pre paid customers)		69%	68%	72%	68%
3	% subscribers satisfied with help services	>90%	69%	67%	63%	61%
4	% subscribers satisfied with network performance, reliability and availability	>95%	73%	71%	73%	70%
5	% subscribers satisfied with maintainability	>95%	69%	67%	63%	60%
6	Overall customer satisfaction	>95%	71%	70%	70%	70%
7	% subscribers satisfied with offered supplementary services	>95%	67%	63%	71%	56%

**Annex-`2C`
Assessment of implementation and effectiveness of Telecom Consumer Protection and Redressal of Grievances Regulations in respect Basic Service (Wire line) through Survey- Tamilnadu Service Area**

S. N.	Sub-parameter	Bharti Airtel	BSNL	Rel Comm	TATA
1	Awareness of three stage grievance mechanism	55%	42%	41%	41%
2	For pre-paid customers, awareness about item-wise call charge details on request	21%	7%	7%	6%
3	If aware (for pre-paid customers), ever denied of item wise usage charge details for pre-paid connection	0%	15%	4%	0%
4	For new customers, provisioning of 'Manual of Practice' while taking the new connection	11%	6%	10%	7%
5	Awareness of Call center for redressing grievances	85%	81%	71%	47%
6	Percentage of consumers made any complaints to the toll free number within last 6 months	9%	12%	7%	2%
7	Call center informing about the action taken on complaints	80%	89%	85%	100%
8	Resolution of complaint by customer care within 4 weeks of lodging complaint	66%	72%	27%	0%
9	% subscribers satisfied with the complain resolution by call center	65%	67%	58%	67%
10	Awareness of Nodal officer for redressing grievances	1%	2%	5%	5%
11	Awareness of Appellate authority for redressing grievances	1%	2%	1%	2%

